PART III.
TEN PAGES.

New-York Tribune.

SUNDAY EDITION.
APRIL 11, 1897.

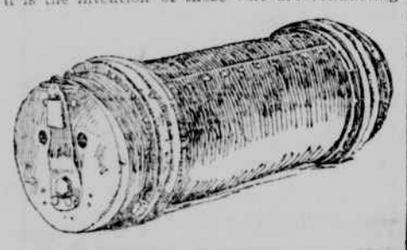
MAILS BY PNEUMATIC TUBE.

THE PLAN AND SCOPE OF THE SYSTEM SOON TO BE ADOPTED.

EIGHT ROUTES UNDER NEW-YORK STREETS, WITH MORE THAN TWENTY SUB-STATIONS—EXPERIMENTS IN OTHER CITIES.

Anything which will beat electricity for speed certainly ought to beat a horse and wagon. And that is the fundamental idea of the pneumatic tube system, which is about to open a new era of transportation in this city. Except in certain particulars, wherein improvements have been made, the method is not novel; but the applications of that method will be so far beyond anything hitherto witnessed, even dreamed of, by the majority of people, as to constitute an interesting surprise, and, what is more, an immense popular convenience. Incoming mails are to be distributed with greater promptness than ever before. From one to two hours more will be afforded in which to catch outgoing mails. And not even a special messenger on an elevated railway train can begin to get up to the Grand Central Station to post an important missive as soon as a cylindrical box from the General Postoffice, impelled by compressed air, can be shot to the same destination through an underground tube. When the business men of New-York get their eyes open to the great saving of time and money which this scheme will effect they will wonder why they never secured such facilities before. The use of the pneumatic dispatch for the local delivery of parcels by the great mercantile establishments of the metropolis will work a similar revolution, and one can easily imagine the astonishment and delight of the women who, on returning home after a shopping expedition, find their purchases already awaiting them there.

Within the last few days the Government has concluded a contract with the Tubular Dispatch Company for the conveyance of mail matter from the General Postoffice in this city, through underground pneumatic tubes along eight different routes, to twenty or twenty-five sub-stations. Two of these lines are to be ready for service on October 1. The completion of the others will follow as rapidly as circumstances will permit, but no definite announcement has yet been made in regard to them. The Tubular Dispatch Company was organized more than twenty years ago under the laws of New-York State, but was recently reorganized, with John E. Milholland as its president. For nearly two years it has been formulating plans which are now partly revealed to the public. Elaborate surveys of routes and computations of the cost of apparatus and operation have been made. The advantages of the system for postal service having been strikingly demonstrated in Philadelphia during the last four years, it was natural that this should be the starting point of the New-York enterprise; but, as already indicated, it is the intention of those who are conducting



THE CARRIER.

the latter to extend it eventually to the transportation of general merchandise also.

The distinctive features of the modern pneumatic method of transportation will appear more clearly after a short review of what has been done in the past. Although something of this sort was suggested to the Royal Society in London more than two centuries ago, it was not until 1853-'54 that the notion was reduced to a practical basis. An electric telegraph company in the British capital laid an inch-and-a-quarter tube between its main office and a sub-station 660 feet distant, for the purpose of sending written messages to the latter point. It was found that these could be distributed more quickly in this manner than if they were repeated over a wire or sent in buckets by a messenger. The messages were rolled up and placed in small cylindrical boxes made of gutta percha and drawn through the tube by suction. In spite of various mishaps the plan possessed enough merit to prove successful. The pneumatic tube system of London has now developed to a degree where thirty-four miles of tube, serving forty-two stations, are required.

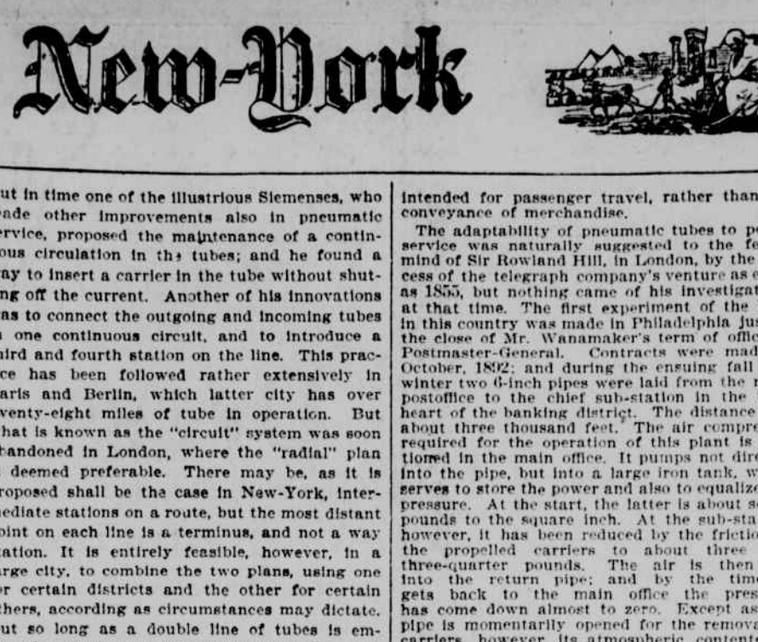
At first only a single tube was used, but afterward two tubes were employed, one to take boxes each way. Propulsion was also effected by forcing air into a tube behind a box, instead of resorting to suction. One of the advantages of this method is that if several boxes are dispatched in rapid succession they will not overtake one another and lodge at some intermediate point as they do when suction is resorted to. For convenience, however, it is common to-day to operate small tubes, which are not called upon to perform frequent service, by suction to carry messages in one direction and by pressure to carry them in the other. The operator, or "tube clerk," at one end of the route, by merely pulling a lever, can reverse the direction of the air current. Telegraphic signals from the other end of the line indicate when it is desirable to substitute suction for pressure. It thus becomes feasible to get along with a single tube. But where business is done on a large scale it is customary to have a double tube, and rely exclusively upon pressure as the motive force.

The size of the tubes and the method of uniting the sections composing them have undergone great changes in the last forty years. Many of those in service in London, Paris and Berlin are two and one-half or three inches in diameter. Those operated in Philadelphia during the last four years are six inches through. That which will connect the New-York and Brooklyn postoffices and which will reach across the East River Bridge will be an eight-inch pipe. The Tubular Dispatch Company will use eight-inch and ten-inch pipes in New-York City.

Brass, cast-iron, wrought-iron and lead have all been used to make these tubes. It is necessary to exclude moisture from these conduits, and, therefore, the joints must be water-tight. In London, for a time, a lead-lined iron pipe was employed, and it was found necessary to solder the lead in making the connections. In order to preserve the circular cross-section during this operation a mandril, or round iron rod, was inserted temporarily. Afterward cast-iron pipes having turned-up flanges at the ends and fastened together with bolts were tried with excellent results, but packing was required at the joints. In Philadelphia a cast-iron pipe with a bell-shaped enlargement at one end, like that on a gas main, is employed. The joint is filled with molten lead. It is believed that the effects of contraction and expansion resulting from temperature changes are met in this way better than in any other, and this style of joint also admits of making slight curves in the line without bending the pipe itself.

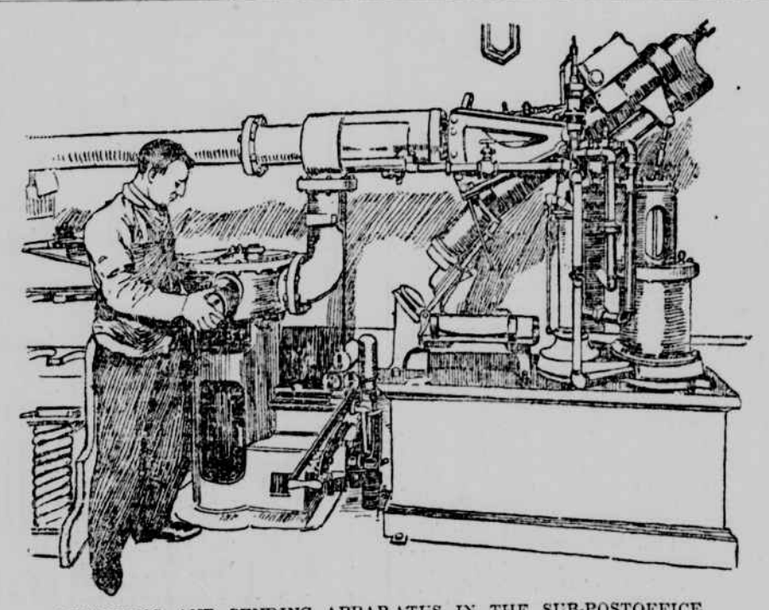
In some of the earlier plants the suction or pressure was applied only at intervals, and when occasion arose. There were large stout metal tanks, into which compressed air had been forced, or in which (on the other hand) a vacuum had been created by exhausting the contents. It was only necessary, therefore, to open a valve in order to establish connection with the transmission tubes. This was a convenient way of storing power, and promoted economy in its use. But in time one of the illustrious Siemenses, who made other improvements also in pneumatic service, proposed the maintenance of a continuous circulation in the tubes; and he found a way to insert a carrier in the tube without shutting off the current. Another of his innovations was to connect the outgoing and incoming tubes in one continuous circuit, and to introduce a third and fourth station on the line. This practice has been followed rather extensively in Paris and Berlin, which latter city has over twenty-eight miles of tube in operation. But what is known as the "circuit" system was soon abandoned in London, where the "radial" plan is deemed preferable. There may be, as it is proposed shall be the case in New-York, intermediate stations on a route, but the most distant point on each line is a terminus, and not a way station. It is entirely feasible, however, in a large city, to combine the two plans, using one for certain districts and the other for certain others, according as circumstances may dictate. But so long as a double line of tubes is employed a single pumping station will serve several radial lines at once, and also several circuits.

So long as there are only two stations on a line, one at each end, the delivery of a carrier is



TERMINALS OF THE TUBE.

a comparatively easy matter. The tube is made to terminate in a large box or tiny closet of tin or other material. On reaching the end of its journey, therefore, the carrier emerges into this "drop-box." The thump with which it lands therein, or else an electric ticker set in operation by the pressure of the carrier against a valve at the mouth of the tube, attracts attention, and leads to its removal. But when there are way stations on the route a different problem is presented. One of the most common methods of intercepting a carrier which is intended for some intermediate point, and not for the terminal station, is to thrust into the tube a perforated screen, which will allow the air to flow onward, but will stop the flying parcel. Such an arrangement is effectual, but it renders necessary an electric signal, sent in advance from the starting point. Various attempts have been made, therefore, to invent an automatic method of securing the same result. What is probably the most successful apparatus of this sort was devised by B. C. Batcheller, chief engineer of the company, which installed the Philadelphia plant. This will be employed in New-York also. Inasmuch as the English patents thereon have not yet been obtained, its inventor prefers not to explain its operation at present. Engineering experts speak of it in terms of high praise, however.



RECEIVING AND SENDING APPARATUS IN THE SUB-POSTOFFICE.

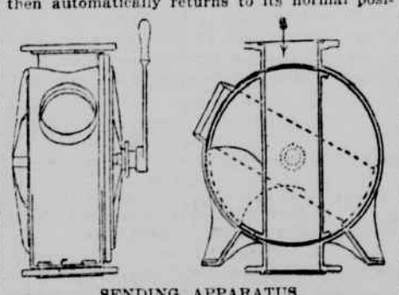
In New-York, as in certain foreign cities, pneumatic tubes (as a permanent institution) were first introduced by a telegraph company. As long ago as 1876 the Western Union laid such tubes from its main office to several of its branch offices. Two ran to Broad-st., one to lower Pearl-st., and one to the Cotton Exchange. Communication was then established with Twenty-third-st., and also with the leading newspaper offices downtown. Subsequently the same system was utilized by that company in Chicago and other cities. It has also been used extensively in tall buildings, especially newspaper offices, for sending letters, manuscripts and similar articles from one floor to another. Hotels have found it a convenience, and in some of the shops salesmen send money and sales memoranda to the cashier's desk in the same manner.

Practical experience shows that the style of carrier employed in the various systems thus far referred to ought not to be much, if at all, larger than those about to be introduced here by the Tubular Dispatch Company. When the diameter exceeds 8 or 10 inches, the loaded carrier is too heavy to be handled conveniently, and the friction between it and the tube becomes a serious matter. Naturally, then, pneumatic engineers long ago considered the feasibility of putting the carriers on wheels, laying rails in the bottom of the conduit, and enlarging the latter from a mere pipe into a tunnel. The first underground railway of this sort began operations in London in 1863. The shape of the hole was not tubular, but like a capital D with its flat side down. This tunnel had a width of 2 feet and 8 inches, and its height was the same. In 1870 two more tunnels were constructed on the same general plan. These were 4½ feet wide and 4 feet high. The shell was of iron wherever the route was straight, but it was made of brick at the curves. A short experimental line of this sort was also constructed in New-York City in 1867 by Alfred E. Beach. It was built under Broadway, near City Hall Park, and had a length of 200 feet. This tunnel had a diameter of 8 feet, and was intended for passenger travel, rather than the conveyance of merchandise.

The adaptability of pneumatic tubes to postal service was naturally suggested to the fertile mind of Sir Rowland Hill, in London, by the success of the telegraph company's venture as early as 1855, but nothing came of his investigations at that time. The first experiment of the kind in this country was made in Philadelphia just at the close of Mr. Wanamaker's term of office as Postmaster-General. Contracts were made in October, 1892; and during the ensuing fall and winter two 6-inch pipes were laid from the main postoffice to the chief sub-station in the very heart of the banking district. The distance was about three thousand feet. The air compressor required for the operation of this plant is stationed in the main office. It pumps not directly into the pipe, but into a large iron tank, which serves to store the power and also to equalize the pressure. At the start, the latter is about seven pounds to the square inch. At the sub-station, however, it has been reduced by the friction of the propelled carriers to about three and three-quarter pounds. The air is then led into the return pipe; and by the time it gets back to the main office the pressure has come down almost to zero. Except as the pipe is momentarily opened for the removal of carriers, however, its atmospheric contents do not escape, but are conducted to another large tank beside the first. It is especially desirable that moisture shall not accumulate anywhere in the tube en route; and pains are taken to work only with air whose humidity has been greatly reduced. Hence, it is better to use this same air over again, on its return, instead of pumping in the outside atmosphere. Of this latter only enough to make good any deficiencies arising from leakage and the momentary opening of the tubes at terminal stations is required. Consequently the compressor, while pumping into one tank, sucks from the other.

The transmitting apparatus, of which a side-view and an edge-view are given in one of the accompanying illustrations, consists of a short section of tube, just big enough to contain a carrier, and so mounted on trunnions in a circular case that it will swing from a vertical position to a diagonal one, whenever a crank outside the case is turned. The edge of the case is pierced at one point, so that when the movable section has been tilted over, it is possible to drop a carrier into the latter through the hole. The crank is then employed to bring the section back to a vertical position. It is now in alignment with the rest of the line, and the carrier instantly drops into the main tube, and is caught by the blast coming in from a branch on one side. The transmitter at the sub-station is arranged somewhat differently, but it works on the same principle.

There are trifling dissimilarities, too, between the receiving apparatus and the sub-station and at the main office. At the former point, there is a short, movable section of pipe, pivoted so as to swing up and down. This is closed at one end, and the other is directly opposite the mouth of the main line tube. The swinging section is so balanced that ordinarily it maintains a horizontal position, and makes close connection with the fixed tube. When a carrier arrives, therefore, its acquired velocity projects it from the latter into the former, where it is stopped by the cushion formed by the air there. The elasticity of this cushion is quickly lessened, however, by the voluntary opening of a valve, so that the carrier is not thrown back again into the main tube. The balance of the movable section having been disturbed by this acquisition, it swings downward enough to discharge its contents and then automatically returns to its normal posi-



SENDING APPARATUS.

tion. This all occurs so quickly that very little of the main line current has a chance to escape. As will be seen from one of the larger illustrations, a branch pipe, diverging just before the terminus is reached, conveys this current down to the return pipe. In the main office, however, the receiver is merely a horizontal trough placed before the mouth of the discharge pipe. The momentum of the carrier is sufficient to deliver it here, although the pressure has become greatly diminished. Valves, however, prevent the escape of air here. The current, such as it is, is switched off by a branch pipe, and flows to one of the storage tanks in the basement.

The carriers are made of sheet steel, 1-32d of an inch thick, and having a riveted seam. The length of each box is 18 inches, and the inside diameter only 5¼, although the tube through which it travels measures fully six inches across. But the intervening space is filled by two semi-elastic rings of woven fabric, which encircle the carrier near its ends. These act like the packing of a piston, prevent the escape of any air past the box, keep the metallic surface of the latter from coming in direct contact with the tube, thus reducing the friction and facilitating movement at curves in the route. The forward end of the carrier is permanently closed, and is provided with a leather-covered felt buffer, secured in the concave metallic head of the box itself. The rear end has a hinged door, with a lock, to which only postal officials have keys. The cushion-like rings just mentioned will wear out, of course, although the interior of the tube in Philadelphia is carefully finished, to make it as smooth as possible. But they can be renewed very easily. This operation becomes necessary after about one thousand miles of service. The time required for each trip of 3,000 feet is from fifty-five to sixty seconds, but a higher velocity can be obtained with a higher pressure. It is the intention of the New-York company to employ considerably higher speed than is needed in Philadelphia, where, at present, only about 500 trips a day are made between the two offices. This is an average of twenty an hour, or one every three minutes; but it is deemed possible to send at least ten carriers a minute, if occasion requires.

In the last annual report of the Postmaster-General, satisfaction is expressed with the workings of the system. During the last four years no interruptions for a longer period than a few hours for repairs have been necessary. The tubes make it possible to keep a mail open until within five minutes of the leaving of a train. Heretofore half an hour, and often an hour, was the smallest possible margin left to the postmaster. The Postmaster-General does not favor the total abolition of wagon service at present, but a judicious combination of wagons with tubes, and he reports that the Department is endeavoring to extend the system to New-York, Boston and other large cities. Referring to this city, however, he admits the possibility that wagons may eventually become needless. He says:

"Parties interested in the construction of such a tube are making every effort to ascertain what such a plant can be constructed for, and the business outlook for such an arrangement, and I think I am safe in saying they are as hopeful as the officers of the Department that they will be able to make a fair business proposition to us in a very little while, covering pneumatic service over almost the entire island, which, of course, will be of great advantage."

In a private letter to Mr. Milholland, dated March 31, 1897, Second Assistant Postmaster-General Neilson refers to his own tour through Europe to examine the pneumatic tubes in use there, and declares that the one to be introduced in New-York is superior to all that he saw while abroad. He congratulates himself that there will be nothing experimental in the venture, and is glad to have concluded these arrangements before his term of office expires. He speaks of the region between the Battery and Forty-second-st., in this city, as the most important business district in America. He adds:

"I am satisfied that the Government will reap a large profit, rather than be involved in additional expense, in this new feature. Our experience has taught us that all improvements which are real have been met by a corresponding improvement in the revenues of the service. This, I am satisfied, will prove even a greater winner than some of the old methods of which I speak.

. . . There is another feature that I forgot to call your attention to while here, and that is the collection wagon, which has proved an absolute success after its experimental stage. By means of the separations made therein of mail taken from lamp-post letter boxes and received from sub-stations the mail will reach the tube stations in condition to be immediately 'tubed' from one point in the city to another."

The eight lines which it is proposed to establish in this city in the near future will all be double, and are as follows:

First—From the General Postoffice at the Mail-st. end, down Broadway and Whitehall-st., to the Produce Exchange. The two tubes will have a total length of 7,500 feet.

Second—From the main office to Station "H," in Lexington-ave., at Forty-fourth-st. The route will lie through Centre-st., Third-ave., Fourth-ave. and Forty-second-st. It will serve three intermediate stations: One at Third-ave. and Ninth-st., another in Madison Square, and the third on Third-ave. at Twenty-eighth-st. The total length of this circuit will be 45,000 feet.

Third—From the main office of Centre-st., across by Marion and Prince to South Fifth-ave., thence to and through Thirteenth-st., Union Square and Fourth-ave., making the Grand Central station its terminus. Two intermediate stations, one in South Fifth-ave. and the other up at Thirteenth-st., will be served by this line, whose entire length (both ways) is 43,480 feet.

Fourth—From the main office through Park Place to West-st., and through Hudson-st. and Eighth-ave. to Fifty-fifth-st. The intermediate stations will be at Hudson and Franklin sts., at a point still further up Hudson-st., and at Twenty-eighth-st. and Seventh-ave. Total length, 50,720 feet.

Fifth—From Eighth-ave. and Fifty-fifth-st. to Third-ave. and One-hundred-and-twenty-fifth-st. The route lies west of Central Park, and includes the sub-stations at Columbus-ave. and Eighty-ninth-st., and Seventh-ave. and One-hundred-and-twenty-fifth-st. Total length, 57,180 feet.

Sixth—From Station "H," at Lexington-ave. and Forty-fourth-st., over to Third-ave., and thence to One-hundred-and-twenty-fifth-st. The stations at Sixty-seventh and Eighty-sixth sts. are on this route. Length, 41,666 feet.

Seventh—From Station "H" across town to Eighth-ave. and Fifty-fifth-st. The line gets into Park-ave. from Lexington-ave. as quickly as possible, and runs westward through Fifty-fifth-st. Length, 15,400 feet.

Eighth—Yet to be surveyed.

Only the first two of these lines are expected to be in operation by next October.

All tubes on these circuits are to have an inside diameter of 8 inches. The carriers will have an internal diameter of 6⅞ inches, with a length of 21 inches.

QUEER RITUALISTIC HYMNS.

PIOUS DOGGEREL THAT IS ATTRACTING LARGE CONGREGATIONS IN EASTERN ENGLAND.

The ritualistic cult in the Eastern counties of England has almost entirely supplanted the old vigorous Congregationalism that used to flourish there. And, strangely enough, it is said to be largely due to the use which the Ritualists make of a certain hymn-book, entitled "Church Songs." These "songs" are said to be by S. Baring Gould and H. Fleetwood Sheppard, and to most healthy Americans will seem to be little better than pious doggerel. For instance, one of the "songs" contains the following stanzas:

A sultan had a daughter sweet,
And, walking in the bowers,
At early dawn the maiden went
Gathering garden flowers.

Then Jesus Christ at cockcrow came,
And at the window stood,
"I come to take the maiden's heart;
I am the Gardener good."

The sultan's daughter rose and said,
"Thy like I have not seen,
O gentle Lord, with locks all wet,
Knee-deep in herbage green."

The sultan to his garden came,
There lay his daughter, dead:
A smile upon her face, her arms
Were as a cross outspread.

Another one reads:

Mary now in joyous cheer,
The maiden, mother, queen;
John the Baptist, John the Seer,
This triumph once foreseen;
Peter, with the double keys;
Magdalen upon her knees,
Apostles twelve in golden sheen.

And in another "song" the people are made to sing these remarkable words:

When David danced before the ark,
It shocked Queen Michal greatly,
That he should not demean himself
Before men's eyes sedately.
To her the ark's return was naught,
She thought his conduct madness;
But David cared not what she thought,
And danced to show his gladness.

To the hymnologist these verses will seem pretty poor, and he will doubtless declaim against the church authorities which have allowed such compositions to be sung in public worship. But, as already remarked, the people seem to like these songs, for the churches which use them are crowded, while the dissenting chapels, which stick to "Coronation" and "Old Hundred," are half empty. Verily, in music, as in everything else, there is no accounting for tastes.

LABOR-SAVING JUSTICE.

From The Chicago Times-Herald.

"The administration of justice in Mexico has certain phases which might startle those who are accustomed to the law's delays in this country," remarked a Chicagoan the other day who has spent the last three years in the sister republic.

"There is no unnecessary delay at any stage of the game. If there is no doubt about the prisoner's guilt technicalities were never allowed to interfere with his prompt punishment. And very often the Mexican authorities manage to save the expense of a trial. Whenever a notorious desperado, for instance, is captured he is turned over to a couple of rurales to be transferred to another jail at some little distance. On the way the prisoner always tries to escape—at least, that is the report made by the guards.

"It is unnecessary to add that no prisoner ever did escape under such circumstances or that no prisoner ever could do so. The guards simply report that their man tried to give them the slip and that they felt compelled to riddle him with bullets to prevent his escape. This dispenses with a trial and a legal execution. No investigation ever is made; it is strictly legal in Mexico to shoot down an 'escaping prisoner.' It is a labor-saving device, that's all, but it is as effective and as expeditious as it is economical."

LITTLE EAST SIDERS' CLUBS.

PUBLIC SCHOOLS TO BE OPENED TO THE BOYS' AND GIRLS' ORGANIZATIONS.

THEIR GOOD INFLUENCE IN REMOVING TEMPTATIONS—HOW THEY ARE CARRIED ON.

Since Corporation Council Scott has decided that there is no legal objection to the opening of the public schools at night for the use of the boys' and girls' clubs of the tenement districts, there is practically no further obstacle in the way of the immediate carrying out of the project, and it is probable that School No. 7, in Hester-st., will be so opened in a few days. The idea of thus greatly extending the good work which the children's clubs now in existence are doing originated with Jacob A. Riis. As the general agent of the members of the Good Government Club, he recommended the matter to them as one worthy of their attention and their aid, and the subject was first made public last January. Subsequently the Public Education Association took it up, using its influence with the Board of Education in favor of the plan.

In speaking of the objects which are accomplished by the clubs Mr. Riis says:

"The gregarious impulse is strong in all boys. They want a chance to fall in, to march in line. If an opportunity is offered of doing it decently, they take it eagerly; hence the phenomenal success of boys' clubs wherever they have been started. If no such chance is offered, and the boy drifts about in the dangerous evening hours when the street makes 'toughs,' there results the 'gang.' The boys' club could have headed it off, but when once it is started the policeman's club has hard work with it for years afterward. The great difficulty has always been to find room for the boys' gatherings. This demand has bet met recently by great numbers of saloon clubs, incorporated under the Raines law. It is well understood that these clubs are simply Sunday saloons. On the six week nights the boys and girls are invited to occupy the rooms. When such a shelter is provided, it is only natural that the children, lacking any other, should accept it, but it is a condition of things which should be prevented at any cost. I have been speaking of the boys' clubs chiefly, but there are large numbers of girls' clubs also, and precisely the same remarks apply to those."

The clubs which, under the auspices of the Public Education Association, are to meet in the public schools will be under the general supervision of Miss Winifred Buck, of No. 14 East Forty-fifth-st. Miss Buck, who has for several years been remarkably successful at the head of different boys' clubs connected with the University Settlement in Delancey-st., will have personal supervision of the first two clubs to take advantage of the new privilege. These will meet, as has been stated, in the Hester-st. school, which is situated in one of the neighborhoods where such work is most needed.

NO CLASSES, NO TEACHERS.

There is no very clear notion among people in general as to the character of these clubs. A common impression is that they are designed for instruction of some kind, through regular lessons, but this is not the case. There are no classes and no teachers—nothing which could remotely suggest the idea of a school. The clubs are wonderfully effective educating mediums, but the object is accomplished simply by healthy amusements. Self-government, the thing of which the children stand in special need, is the dominant principle. As Miss Buck will carry out in the new clubs of which she is to take charge exactly the same ideas as she does now with those at the University Settlement, a short description of the latter will serve as an accurate outline of the coming public school clubs for boys. Slightly different methods may, of course, be employed by others who may subsequently take up the work and start other clubs, but the work will, in general, be modelled after the ideas from which Miss Buck has had such good results. The clubs for girls, it should be said, while embodying the same principles, are of a more sedate order, and seem to thrive best where some regular work, such as sewing or systematic reading, is pursued.

It was an unusually interesting hour that the reporter spent last Thursday afternoon at the semi-weekly meeting of the "Young Potomac Club," the organization which will serve as a model for those about to be formed. This is the title which was chosen by the members of the club, who are stanch patriots, "to commemorate the deeds of the 'Army of the Potomac.'" Every one of these boys, probably without a single exception, is the child of a foreigner; most of them are of Polish or Russian parentage, and all of them are Jews. It is simply wonderful to see how they have imbibed not only the facts of American history, but unmistakably American ways of thinking and acting as well. Each of their meetings lasts two hours, the first half being devoted to games and athletic sports of all kinds, and the second to the business session.

Football, in a rather subdued form, made necessary by the nature of the place in which it is played, is one of the favorite amusements of this first hour. The boys show remarkable self-control; there is not a suspicion of "slugging," and they extricate themselves from apparently fierce rushes and tackles with the greatest equanimity and good nature. They are almost never hurt, and complaints, which are scornfully regarded as babyish, are rare. The hard, cement floor of the indoor playground at No. 7 will probably preclude football there, unless some other available place in the building should be found where the game can be enjoyed. An existing rule which forbids throwing the ball prevents any damage to the windows, the pictures, or any of the room's furniture. Fencing with wands was another amusement at which several of the boys displayed not a little skill last Thursday. The knowledge of a few of the most important thrusts and parries was brought into the club through one of the members who had picked it up somewhere, and who hastened to introduce it as a desirable novelty in the list of games. A few of the boys who do not happen to feel like athletics may usually be seen off in one corner playing checkers or chess. The club members themselves have decided that cards had better be excluded; in the boys' minds the bits of pasteboard are associated with gambling, and are unpleasantly suggestive of the back rooms of saloons.

THE BUSINESS SESSION.

The business session which follows the hour of sports is in many ways even more interesting to watch than the latter. The organization of the boys is perfect, and they seem to derive an immense amount of pleasure from the orderly transaction of matters pertaining to the club. These are always many, and, to the members' minds, fraught with the utmost importance. Every one wishes to express his opinions, but amid all the enthusiasm the strictest respect for the rules of parliamentary law is maintained. The main body of the club ranges itself upon a row of chairs along one side of the room, while the officers seat themselves around a table placed in the middle of the floor. As the roll is called and the members answer to their names, any boy who may owe dues (three cents apiece, payable weekly), comes forward and lays the amount on the table. The sum thus collected from the thirty-five members of the club is not sufficient to pay all the expenses of their meeting-place, but it gives them a feeling of independence and responsibility. The boys also raise money among themselves to buy any games or apparatus which they desire for the club.

After the calling of the roll the various communications are read to the club by the secretary. Sometimes they are from members of other clubs, who desire to arrange a baseball match or a debate with the "Young Potomacs," and sometimes they relate strictly to the inside business of the club itself. Discussion upon them is always lively. If any over-excited member should so far forget himself as to disregard the parliamentary regulations, the president's gavel comes down hard upon the table, and the offender is called to order with so much vehemence and firmness that he is promptly subdued. When in business session the boys address each other in the most dignified way as "Mr. Lezinsky," "Mr. Cohen," etc. It is not often necessary for the director to interfere in any way. Her presence has a wholesome influence, however, as it has been shown that the clubs do not prosper without the attendance of their adult director.

CANDIDATES WELL SCRUTINIZED.

The boys of the club are exceedingly careful about the character of the new members they admit. An Investigating Committee looks into the records of each applicant, making inquiries as to his standing at school, in his home and in the neighborhood generally. If there is any reason for criticising the conduct of one who is already a member, formal charges must be brought up against him at a regular business meeting. These must be substantiated by at least two witnesses who are themselves of unquestioned honesty, and if the accused is proved guilty he is suspended from the club by a general vote. The term of his suspension is seldom less than three weeks, and it may be more. Shooting craps is regarded as a disgrace to the club. As a matter of course, it would not be permitted at the meetings, but the boys go further than this, for if a member is caught at the practice in the street or anywhere else, he is haled before the club tribunal for bringing discredit upon the organization.

Perhaps enough has been told of the club's principles and methods to give a clear idea of the nature of these institutions. That they are immensely popular with the children is emphasized every day by the number of applications for meeting places, which have hitherto had to be refused, but which, if a number of the schools are opened, can now be granted. The boys and girls appreciate what is being done for them, and hold their club directors in the most affectionate regard. They do not prefer the saloon club, which has recently been holding out tempting offers to them; they take far more kindly to associations of a better sort; but the instinct of companionship in a regular meeting place is strong, and it would be strange if they did not accept the worse substitute, in default of the better.

Tuesdays, Wednesdays and Saturdays are the nights on which it is proposed to open the Hester-st. school at present. Miss Buck will form her first club by taking with her five boys selected from among the "Young Potomacs." They will bring their friends, and, judging from the rapidity with which the membership limit of thirty-five has been reached heretofore, it will not be long before the lists are full. The formation of other clubs is open to any one who is interested in the work and is willing to comply with certain regulations which have been laid down. Among these are that the director must furnish satisfactory references in every respect to the Public Education Association, and that the members of the club shall be between the ages of twelve and eighteen. Inquiries or applications may be made to Miss Buck, as general supervisor under the association.

CHAIRLESS JAPAN.

AN AMERICAN WOMAN'S EXPERIENCE WITH FURNITURE MADE TO ORDER.

"One of the funniest experiences I had in Japan," said a woman recently, who has been connected with missionary work in that country, "was with chairs. It had never entered my mind that what is with us such a common article of household furniture should be an unknown quantity to any of the subjects of the Mikado, and it was with dismay that I discovered the house I was to occupy was quite chairless. I immediately summoned a native carpenter, and tried to explain to him what I wished him to make for me. It was an extremely difficult task, for he was evidently unable to comprehend why any one should desire to sit otherwise than cross-legged upon the floor. Unfortunately, my talent for drawing is strictly limited. I realized that fact, but until I had made several ineffectual attempts to portray a chair—about as easy a subject as I could have had—I had never really appreciated the extent of my incapacity. The drawings which the poor carpenter finally carried off with him as models were such that my heart misgave me. That I had good reason for my fears was shown when the chairs were sent home. With the proverbial Oriental faithfulness, the man had made precise copies of his patterns. Where the chairs of my sketches had weakly balanced backs, slanting seats and crooked legs, so their wooden counterparts exhibited the same peculiarities. They were more difficult to sit on than I should ever have imagined chairs could possibly be. Some of them needed the mural support of a friendly wall to enable them to make any sort of success of standing on their legs.

"It was a little after this that I gave a small reception to a few of the people whose acquaintance I had made. One of the first to arrive was a city official of high rank. Anxious, apparently, to do the correct thing in my eyes, he seated himself on one of the chairs, very gingerly, it must be confessed, for he confined himself to the extreme front edge, and looked as if he expected some accident to happen at any moment. When I handed him the tea and cake which comprised the refreshments, he took the cup in one hand and the plate in the other. Then he sat there, with his hands full, not knowing what to do in order to be free to eat, and looking thoroughly miserable. After a minute or two of this suspense, which I must say I was enjoying, he begged me in a most deprecating manner for permission to sit in the fashion of his country. Of course I hastened to grant it, and I shall not soon forget the look of relief with which he slid gently and gracefully to the floor. There he disposed his cup on one side of him and his plate of cake on the other, and proceeded to eat and drink in comfort. The later callers took their cue from him and fought shy of the foreign innovations also. Considering how the chairs looked, I don't know that I can blame them, but I am afraid that they would have treated even the finest specimens of American workmanship with the same distrust."

DEVIL-FISH AND DYNAMITE.

Atlanta correspondence of The St. Louis Globe-Democrat.

Ben Conner, who has been employed in the work carried on by Colonel C. P. Goodyear in deepening Brunswick Harbor, tells a thrilling story of an adventure with an octopus that occurred while they were blasting in the harbor.

"The work was carried on with a mammoth sea harrow," said Ben, "with which the tenacious blue clay at the bottom of the bar was broken up. It is a ponderous affair and was dragged back and forth along the channel by means of strong cables and a small steam tug, and its weight would sink the steel blades attached to the roller in the sticky conglomerate and tear it up so that the outgoing tide would wash away the loose earth and deepen the channel on the bar.

"In addition to the harrow, dynamite was used in fifty-pound charges, exploded at intervals where the hard shell and coral-like formations would not yield to the harrow. Our method of exploding the charges was simple. We had a small reel on another tug around which was coiled a stout cable and around a windlass was another smaller rope and a wire for exploding the charge.

"The dynamite was fixed for exploding and placed in an old gunnysack and carefully lowered over the side while the tug moved off some fifty yards, and so soon as the dynamite was safe at the bottom and we were at a safe distance away the button was touched and the charge went off, sending up jets of water quite a hundred feet high and frequently sending fine fish to the top, where they were picked up by the men. But occasionally a charge would fail to explode, and in such an instance we would haul away on the smaller line and tow the dynamite to the surface and rearrange the fuse and drop it overboard for a fresh trial.

"One day we were out near the bar, working away, and had got off several charges successfully. At last we steamed off some distance from where we had been at work, and dropped a fifty-pound bundle of the explosive overboard, and after moving off to a safe distance we tried to explode it. But it did not explode, and we began to haul in the rope to which it was attached to see what the trouble was. The men who were tugging at the rope remarked that it must have become entangled in a portion of some old wreck, as it was so hard to tow in. An extra effort, however, seemed to loosen the obstruction, and we redoubled our efforts. Suddenly two great slimy arms came up out of the sea and slapped against the side of the tug, and then another reached out toward the gunwale, and at the same time the bundle of dynamite, clutched in the tentacles of a gigantic devil fish, appeared on the surface.

"The men who were tugging at the rope dropped it and tumbled backward in their fright, and it looked for a moment like the devil-fish was going to come on deck or pull the entire tackle into the sea with him. His great baleful eyes gleamed angrily as he came to the top, and his slimy arms were writhing and tossing on the waves, and you never saw a lot of dynamiters as badly frightened as we.

"'Touch off the charge!' shouted the engineer, but that was not practicable, as it had already failed to explode, and, besides, it might have endangered the vessel. One of the men grabbed an axe and aimed a blow at the exposed tenacle which was writhing along the side of the tug, but his aim was bad and he struck the rope instead and the monster slowly sank out of sight, with the big charge of dynamite still clasped in his ugly arms.

"I would have given $50 to have been able to touch off that charge of dynamite. I would have enjoyed seeing the look of astonishment in the defiant eyes of that hideous devil-fish as he was hoisted into the air. But as it was we had to give it up and allow the old villain to wriggle back to his slimy lair with a valuable bundle of high explosive on which to test his digestive apparatus. I don't know what was the ultimate result, but I rather suspect that the devil-fish died of appendicitis, as we were not troubled with a similar visitation during the progress of the work."

A PRACTICAL MAN.
How Mr. Smith, rich, lazy and fat, takes the Knapsy cure.—Fliegende Blätter.